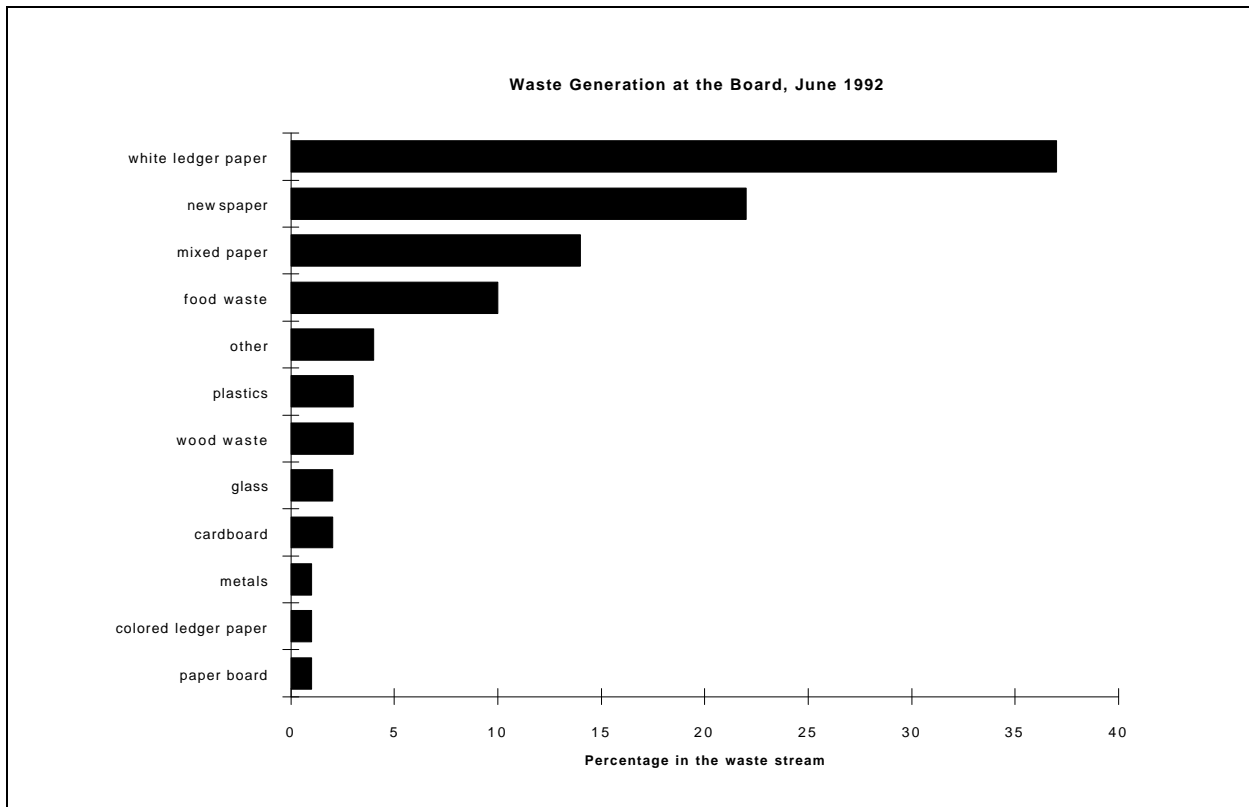


## Appendix A. Results of the June 1992 CIWMB Waste Audit

During one week in June 1992, CIWMB staff collected, sorted and categorized materials from disposal and recycling streams. Staff conducting the waste audit determined that CIWMB staff generate 1.15 pounds of waste per person per day. This study provided the committee with information about the type and quantity of waste generated (see table below<sup>1</sup>). The committee used this information to help determine waste categories to target.

White ledger paper comprised 37 percent of waste generated and constitutes the largest single source of waste. There is ample opportunity to reduce paper use and save money by using it less wastefully (e.g., print double-sided copies, find uses for scrap paper printed on one-side only, print fewer copies). Other major categories were newspaper (22 percent), mixed paper (14 percent), and food waste (10 percent).

Of the materials being targeted in this Plan, only landscape waste was not included in the waste generation study. This waste is handled by a landscape contractor hired by building management rather than the CIWMB. The committee believes landscaping waste should be part of the Plan, because it can be a significant portion of the waste stream.



---

<sup>1</sup> Draft Waste Audit Summary Report, prepared by Terry Brennan.

## **Appendix B. Waste Reduction Pro duty statement**

With full support from the Board and its executive office, Waste Reduction Pros assist with promoting waste prevention and recycling efforts at the CIWMB. Specifically, this assistance includes:

- Educating division/office staff, especially new employees, in waste prevention techniques, recycling procedures and the goals and benefits of waste reduction.
- Explaining what is and what is not acceptable within each recyclable category; refer difficult questions to In-House Recycling Coordinator.
- Working with employees to avoid contamination of recyclables, including visually auditing central containers for contaminants periodically.
- Assisting the efforts of the In-House Waste Prevention Committee and In-House Recycling Coordinator to promote waste prevention and recycling.
- Actively soliciting questions, concerns or suggestions about waste prevention and recycling from staff within their assigned areas.
- Providing desktop containers (available from In-House Recycling Coordinator).
- Encouraging appropriate employee waste prevention and recycling habits by: being attentive to inappropriate disposal of recyclable or reusable materials, providing gentle reminders to individuals, leading by example, and emphasizing the positive.
- Seeking to resolve waste prevention and recycling concerns at staff meetings.
- Advising In-House Recycling Coordinator of action needed regarding overflowing central containers, addition or deletion of central containers, and training/orientation needs at division/office staff meetings.
- Periodically meeting with In-House Recycling Coordinator and/or In-House Waste Prevention Committee to develop problem solutions and discuss significant changes in the program.

### **Appendix C. CIWMB In-House Waste Prevention Policy**

As part of its overall integrated approach to waste management, it is the policy of the California Integrated Waste Management Board to implement cost-effective waste prevention practices in all of its in-house and external operations. Specifically, except where prohibited by State law, regulations, or pre-existing contracts, the CIWMB shall:

- reduce paper purchases by 10% over the next year;
- purchase photocopiers with a duplex function;
- purchase computer printers that have a double-sided printing capability;
- maintain all copiers and printers in working order;
- double-side all documents and communications except where necessary in the case of master documents or where equipment is unable to perform this function reliably;
- assure that electronic systems are set up to allow for default double-sided copying;
- minimize changes in procedures, formatting, and documents which generate waste;
- allow internal documents to be submitted with minor legible handwritten corrections;
- practice waste prevention in all procurement decisions;
- operate in a facility that maximizes waste prevention in its custodial, maintenance and landscaping practices; and
- implement other waste prevention practices as deemed appropriate.

### **CERTIFICATION**

The undersigned Executive Officer of the California Integrated Waste Management Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the California Integrated Waste Management Board held February 23, 1994.

Dated:

Ralph E. Chandler  
Executive Officer

"Original signed by"

### **Appendix D. Sample tips**

#### **Waste Prevention Tip: E-mail messages without paper waste**

To use less paper or avoid printing out E-mail messages, here are a few options:

- 1) Be selective. Ask yourself if you really need a hard copy.
- 2) Highlight similar messages (hold the "shift" key down and use the arrow key to select a block of messages, hold the "control" key down and click to select discontinuous messages) and print them out together. This way several messages may fit on a page.
- 3) File your e-mail messages electronically. You can create an e-mail file folders and sub-directories for specific topics. Move or save messages in these files. This way they are easy to look up and you won't need to print hard copies.

**Paper reduction tip: Minor hand corrections are OK**

Our new waste prevention policy approved by the Board allows internal documents to be submitted with MINOR LEGIBLE handwritten corrections. This means it is okay to make neat handwritten corrections to fix typos and punctuation, add a word or delete one on documents you give to your managers so long as the document is for internal use. Just think, you can save time and paper by making a simple hand correction and by having several people review the same draft.

**Paper reduction tip: Practicing the three R's**

**REDUCE**

- preview before you print
- only print or copy what you need
- print or copy double-sided

**REUSE**

- make your own note pads (bind paper with a clip, put paper in a clip board or three-hole notebook)
- put best quality one-sided paper (no wrinkles, staples or tape) in the reuse collection boxes (it is OK to include colored paper)
- if you need a desktop collection container, consult your Waste Reduction Pro

then..... RECYCLE paper that is sensitive or too damaged for reuse.

For a complete list of tips contact the Waste Prevention Info Exchange at (916) 255-INFO.

## Appendix E. Sample tracking sheet

### Monthly Paper Use by Floor

	Paper on-hand first of month		Paper deliveries during month		Total paper available during month		Paper on-hand end of month		Total paper used during month
1st floor 8800		+		=		-		=	
2nd floor 8800		+		=		-		=	
3rd floor 8800		+		=		-		=	
1st floor 8810		+		=		-		=	
Total monthly paper use									

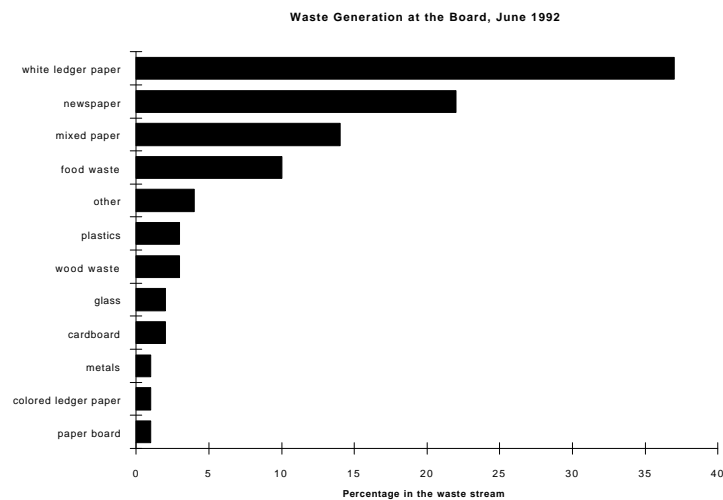
The chart below shows the CIWMB's results using a tracking sheet like the one above. It indicates overall paper use per employee. The term, "day" means **working day** (excluding holidays and weekends).

The percent reduction from the February baseline month through October 1994 was 25 percent. This does not include the CIWMB's central copy center which is tracked separately. The Copy Center purchased new equipment that greatly increased the amount of large copy orders done in-house. However, before the new equipment was acquired, the copy center had a 31 percent decrease from February to March 1994.

## Appendix F. Copy of the food survey

### Short Survey

You have been selected to participate in a random survey that concerns waste generation at the CIWMB. Below are 10 short questions (it only takes about 5 minutes to complete). To show our appreciation for your participation we have a reusable lunch bag for you. Your responses will be kept confidential and thank you very much for participating.



1. What do you throw away at work in a typical week? (This does not include items that go into recycling bins, just your trash can.)

Please indicate the number of items:

- |   |  |
|---|--|
| <input type="checkbox"/> used envelopes       | <input type="checkbox"/> food wrappers                     |
| <input type="checkbox"/> mixed paper (sheets) | <input type="checkbox"/> left-over food                    |
| <input type="checkbox"/> white paper (sheets) | <input type="checkbox"/> beverage containers (cold drinks) |
| <input type="checkbox"/> legal paper (sheets) | <input type="checkbox"/> beverage containers (hot drinks)  |
| <input type="checkbox"/> newspaper            | <input type="checkbox"/> other, please describe            |
| <input type="checkbox"/> lunch bags           |  |

**2. Take a peek in your trash can right now, describe what is in it?**

Today's date:

Description:

**3. How many of the following beverage types do you buy in a typical week from the CIWMB's cafeteria?**

- ☐ cold beverage in bottle or can
- ☐ cold beverage from soda dispenser
- ☐ hot beverage

**If you purchase beverages at the cafeteria, how often do you bring your own beverage container?**

Hot beverages

- ☐ always
- ☐ most of the time
- ☐ about half the time
- ☐ seldom
- ☐ never

Cold beverages

- ☐ always
- ☐ most of the time
- ☐ about half the time
- ☐ seldom
- ☐ never

**4. How often do you eat lunch at a fast food restaurant in a typical week?**

☐ days, which ones (within a 3 mile radius)? \_\_\_\_\_

**5. How often do you bring your lunch to work in a typical week? ☐ days**

**6. Do you bring your lunch to work in:**

- ☐ **disposable containers** (e.g., a paper or plastic bag with single-use baggies holding food that are thrown out after the meal)
- ☐ **reusable containers** (e.g., durable plastic containers that you wash and reuse)
- ☐ **disposable lunch sack with reusable containers holding food**
- ☐ **other**, please describe:

**7. Do you keep your own washable plate and fork or spoon at work?**

**8. Do you keep a washable napkin at work?**

**9. What could we do at the CIWMB to motivate everyone to reduce lunch time waste?**

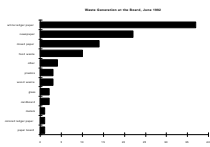
**10. What are the most important barriers that limit your ability to reduce lunch time waste?**

## Appendix G. Calculating paper reduction savings

Below are some values that may help you calculate cost savings from paper reduction activities. Typical office paper is 20 lb weight. There are about 200,000 sheets in a ton.

Item	\$/ton	cents/sheet
<b>Imaging</b>		
Retail photocopying (high)	12,000	6
Retail photocopying (low)	5,000	2.5
Low speed laserprinter-toner	4,000	2
High speed laserprinter-non-paper	2,400	1.2
State leased copiers (includes labor, maintenance, machine)	10,000	5
<b>Purchase and Disposal</b>		
Paper purchase	1,000	.5
state agency paper purchase	1,200	.6
Municipal solid waste hauling, typical	100	.05
Municipal solid waste landfilling, typical	50	.025
<b>Shipping</b>		
First class mail (\$.23/ounce)	7,000	3.5
Federal Express-extra pounds (high)	5,500	2.75
Federal Express-extra pounds (low)	2,000	1
Priority Mail - extra pounds (high)	2,100	1.05
Priority Mail - extra pounds (low)	800	.4
Parcel Post - extra pounds (high)	2,100	1.05
Parcel Post - extra pounds (low)	80	.04
<b>Time</b>		
Time (\$12/hour; 30 seconds/sheet)	20,000	10

Sources: Bruce Nordman, Lawrence Berkeley Laboratory, "Useful facts for Your Paper Efficient Office," 11/16/94. Chuck Walker, Business Equipment Analyst, Dept. of General Services, personal communication 2/8/95.



## Appendix H. Order form for more information CALIFORNIA WASTE PREVENTION INFO EXCHANGE REQUEST FORM

Indicate the desired documents and mail or fax this form to the California Waste Prevention Info Exchange. Additional materials covering a variety of topics are available upon request by the calling (916)255-INFO, fax (916) 255-2220.

### CIWMB Waste Prevention and Recycling Programs

- \_\_\_ *Business Services and Assistance Available from the California Integrated Waste Management Board, CIWMB, periodically updated, (brochure)*
- \_\_\_ *CIWMB Publication List, periodically updated*

### Design and Product Stewardship

- \_\_\_ *Checklist for Environmentally Sustainable Design and Construction, Environmental Building News. (2 pgs)*
- \_\_\_ *The Design Principles of Environmental Stewardship, American Design Council. (1 pg)*

### General Waste Prevention

- \_\_\_ *Source Reduction, Stopping Waste at the Start, CIWMB, Fall 1992. (brochure)*
- \_\_\_ *Statewide Waste Prevention Plan, CIWMB, May 1993. (45 pgs)*
- \_\_\_ *Source Reduction Now, Minnesota Office of Waste Management, Spring 1993.*
- \_\_\_ *Waste Prevention Ideas, CIWMB, #500-94-008, Spring 1994. (2 pg)*
- \_\_\_ *Waste Prevention Pays Off, Companies Cut Waste in Workplace, USEPA, Nov. 1993, short descriptions of how businesses practice waste prevention. (24 pgs) Order free multiple copies at 1-800-424-9346, publication EPA/530-k-92-005.*
- \_\_\_ *Less Waste in the First Place, Source Reduction Opportunities in America, Keep California Beautiful video order form, fall 1994.*
- \_\_\_ *Definitions, CIWMB, Fall 1994 (fact sheet)*
- \_\_\_ *Waste Reduction for Business & Industry, CIWMB, Spring 1993. (brochure)*
- \_\_\_ *Strategies for getting businesses involved, CIWMB, Summer 1994 (fact sheet)*

### Getting started: setting up a waste reduction program

- \_\_\_ *Reduce, reuse, recycle; It's good business; A guide for California Businesses, CIWMB, Summer 1994 (40+ pgs)*
- \_\_\_ *Encouraging Top Management, CIWMB, Fall 1994 (fact sheet)*
- \_\_\_ *Environmental policies for businesses, CIWMB, Fall 1994 (fact sheet)*
- \_\_\_ *Motivating Employees to Change Old Habits, CIWMB, Fall 1994 (fact sheet)*

- \_\_\_ *In-house Waste Prevention Plan and Implementation Activities at the CIWMB, CIMWB, draft, fall 1994*

### Government

- \_\_\_ *You Can do it Too! Preventing Office Waste at the CIWMB, Based on in-house waste prevention program at CIWMB. Covers plan, policy statement, resolution, implementation, results to date. Spring 1995 (18+pgs)*
- \_\_\_ *Source Reduction Case Study, County Courthouse and Garages, Minnesota Office of Waste Mgmt, Spring 1993 (15 pgs)*

### Hospitals

- \_\_\_ *Waste Reduction Activities for Hospitals. CIWMB, Summer 1994 (8 pgs)*
- \_\_\_ *Source Reduction Hospital Case Studies*
- \_\_\_ *Minnesota Office of Waste Mgmt, Spring 1993 (16 pages)*
- \_\_\_ *Legacy Health System, Harding Lawson Associates, May 1994 (12 pgs)*

### Hotels

- \_\_\_ *Waste Reduction in Hotels and Motels, CIWMB, Fall 1994 (fact sheet)*
- \_\_\_ *Great Canadian Hotels with Great Environmental Ideas. Canadian Pacific Hotels & Resorts. (10 pages)*

### Landscape waste prevention

- \_\_\_ *Composting, Nature's Way to Recycle. CIWMB, Fall 1992. (brochure)*
- \_\_\_ *Grasscycling, Send Your Grass Back to its Roots. CIWMB, Spring 1993.*
- \_\_\_ *English*
- \_\_\_ *Spanish*
- \_\_\_ *Is it cost-effective to provide free compost bins? City of Glendale, March 94. (7 pgs)*
- \_\_\_ *Pilot Compost Bin Distribution Program, Final Report, Alameda County Home Composting Program, Jan. 1994. (26 pgs)*
- \_\_\_ *Waste Reduction Opportunities in the Landscape Industry, CIWMB, fall 1994 (fact sheet)*
- \_\_\_ *Worms, CIWMB, winter 1993. (brochure)*
- \_\_\_ *Xeriscaping, USEPA, booklet, call 202-260-7751 to order free copy, publication #EPA 840-B-93-001*

### Manufacturing



- \_\_\_ Fact sheets for manufacturers, Indiana Department of Environmental Management, Indiana Recycling Coalition, October 93. (20 pgs)

#### **Market development zone and loan program**

- \_\_\_ *Recycling Market Development Zones*, CIWMB, 1994 (brochure)

#### **Measurement**

- \_\_\_ *Estimated Average 1990 Waste Stream Composition not including Diversion of Excluded Waste Types*. CIWMB, Spring 1994. (1 pg)
- \_\_\_ *Measurement of Source Reduction*. Minnesota Office of Waste Management, Spring 1993. (12 pgs)
- \_\_\_ *Commonly Used Formulas*. Minnesota Office of Waste Management, Spring 1993. (1 pg)
- \_\_\_ *Quantifying Packaging Waste at Grocery Stores*, Jeff Ledermann and Louise Yount. Resource Recycling, December 1992.

#### **Meetings and conferences**

- \_\_\_ *Waste Reduction Ideas for Meetings & Conferences*, CIWMB, Fall 1994 (fact sheet)

#### **Newspapers**

- \_\_\_ *Source Reduction Newspaper Case Study*, Minnesota Office of Waste Mgmt, Spring 1993 (7 pages)

#### **Offices**

- \_\_\_ *Waste Reduction Ideas for Offices*, CIWMB, Fall 1994 (fact sheet)
- \_\_\_ *INFOPAC: Paper Reduction Project, Nissan Motor Corporation*. Case study. Spring 1992.
- \_\_\_ *Office Paper Recycling Guide*, National Office Paper Recycling Project, 1991. 24 pages
- \_\_\_ *Creating a Paper Reduction Campaign*, CIWMB, Fall 1994 (fact sheet)

#### **Packaging**

- \_\_\_ *Preferred Packaging Procurement Guidelines*, CIWMB, Summer 1994 (20 pgs)
- \_\_\_ *Use Less Packaging and Prevent Waste!* CIWMB, Fall 1994 (fact sheet)  
(Also see Design and Product Stewardship)

#### **Planning**

- \_\_\_ *Waste Reduction in Yosemite National Park: An Action Plan*. National Park Service, et. al., March 1993. (33 pages)

#### **Purchasing**

- \_\_\_ *Purchasing for Waste Reduction*, CIWMB, summer 1994 (fact sheet)

#### **Printers**

- \_\_\_ *Source Reduction Survey, Columbine Printing*, State of New Mexico, May 93, covers solid waste, energy, and water conservation recommendations to business. (8 pgs.)
- \_\_\_ *Waste Prevention in the Printing Industry*, CIWMB, Fall 1994 (fact sheet)

**Promotional materials**

- \_\_\_ Samples of clip art, CIWMB, winter 1995
- \_\_\_ Sample posters (see back side of this page), CIWMB, spring 1995
  - \_\_\_ Be Wise Use Both Sides
  - \_\_\_ Take Your Cup for a Drink
  - \_\_\_ Reuse for the Next Drop
  - \_\_\_ Before You're Through Use Side Two

**Property management**

- \_\_\_ *Reducing Waste in Property Management*, CIWMB, Fall 1994 (fact sheet)

**Recognition for a job well done**

- \_\_\_ *Waste Reduction Awards Program*, CIWMB program brochure (periodically updated)
- \_\_\_ *Recognizing Waste Reduction Leaders*, CIWMB, Fall 1994 (fact sheet)

**Restaurants and eating places**

- \_\_\_ *Food for Thought, Restaurant Guide to Waste Reduction and Recycling*. CIWMB and City of San Francisco, Summer 1993. (10 pgs)
  - \_\_\_ English
  - \_\_\_ Spanish
  - \_\_\_ Chinese
- \_\_\_ *Food Service Waste Reduction Tips*, CIWMB, Fall 1994 (fact sheet)

**Retail stores**

- \_\_\_ *Waste Reduction at Retail Stores*, CWMB, Fall 1994 (fact sheet)
- \_\_\_ *Solid Waste Assessment Report*, (prepared for retailer), Alameda County Waste Management Authority, Aug. 1992. (16 pgs)

**Reuse and Material Exchanges**

- \_\_\_ *Construction and Demolition Resource and Vendor Lists*, CIWMB, Fall 1994 (fact sheet)
- \_\_\_ *CALMAX (California Materials Exchange)*, CIWMB, (Brochure)
- \_\_\_ *Materials Exchange Fact Sheet*, CIWMB, Fall 1994 (fact sheet)
- \_\_\_ *How to Market a Materials Exchange*, CIWMB, Fall 1994 (guide)
- \_\_\_ *How to Set up a MiniMax*, CIWMB, Fall 1994 (guide)

**Schools**

- \_\_\_ *Seeing Green Through Waste Prevention, A Guide for School Districts*, CIWMB, Spring 1994. (61 pgs)

**Toxic materials**

- Fact Sheets. CIWMB, Spring 1993.
  - \_\_\_ Antifreeze
  - \_\_\_ Aerosols
  - \_\_\_ Latex paint
  - \_\_\_ Lead-acid batteries (used in automobiles)
  - \_\_\_ Oil-based paint
  - \_\_\_ Used oil

**Unit Pricing**

- \_\_\_ *Unit Pricing for Solid Waste: An Introduction for Decision Makers*, CIWMB, Nov. 1993. (48 pgs)
- \_\_\_ *Beyond the Decision: Unit Pricing System Design and Implementation*, CIWMB, Nov. 1993. (50+ pgs)
- \_\_\_ *Resource Guide to Unit Pricing for Solid Waste: Case Studies and References*, CIWMB, Nov. 1993. (116 pgs)

**Other requests are welcome!**

- \_\_\_ Please describe what you need:

---

**Send to:**

**California Waste Prevention Info Exchange  
California Integrated Waste Management Board  
8800 Cal Center Drive  
Sacramento, CA 95826  
Fax: 916-255-2220**

Please write your name, mailing address, and phone number below.

---

---

---

---

Phone:

*Please allow 2 to 4 weeks for delivery*

